APR 2 0 2009

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A cationic dye Gationic dyes of the general formula I

CAT* Y (I).

<u>wherein</u>

CAT* is a cation selected from azine, xanthene, polymethine, styryl, azo, tetrazolium, pyrylium, benzopyrylium, thiopyrylium, benzothiopyrylium, thiazine, oxazine, triarylmethane, diarylmethane, acridine, quinoline, isoquinoline, and quaternized azafluorenone dyes,

where Y is an anion selected from the group CAB, FAP, FAB, and or Im.

CAB conforms to the general formula (II-1)

$$[B(CN)_{v1}F_{4-v1-x1}(R^0)_{x1}]^{-}$$
 (II-1)_a

and

where

yl <u>is denotes</u> 1, 2, 3 or 4,

x1 is denotes 0, 1, 2 or 3, and

 R^0 is denotes alkyl, aryl, fluorinated alkyl, fluorinated aryl, cycloalkyl or alkylaryl, with the condition that R^0 may be hydrogen if yl is >2,

where

FAIr conforms to the general formula (II-2)

$$[P(C_{02}P_{2p2+1+m2}H_{m2})_{y2}F_{6-y2}]$$
 (II-2),

₩ith:

p2 [[:]] is 1 to 20,

m2 [[:]]is 0, 1, 2 or 3, and

y2 [[:]] is 1, 2, 3 or 4,

whore

FAB conforms to the general formula (II-3)

 $[B(C_{n3}F_{2n3+1-n3}H_{m3})_{y3}F_{4-y3}]$ (II-3).

with

p3 [[:]] is 1 to 20,

m3 [[:]]is 0, 1, 2 or 3, and

y3 [[]] is 1, 2, 3 or 4,

where

Im conforms to the general formula (II-4)

 $[(C_{p4}F_{2p4+1-m4}H_{m4}XO_{y4}) N (C_qF_{2q+1-k}H_kXO_{y4})]^* (II-4),$

and the variables

X is denotes carbon or sulfur,

p4 is denotes 0 to 20 and $0 \le m4 \le 2p4+1$,

q is denotes 0 to 20 and $0 \le k \le 2q+1$,

y4 is denotes 1 or 2,

where

m4 <u>is</u> [[=]] 0 if p4 <u>is</u> [[=]] 0, and

k <u>is [[=]] 0 if q is [[=]] 0, and</u>

the sarbon atoms of the alkyl chain of the formula II-4 may be bonded to one another
by single bonds, where the resultant alkylene chain may in turn be partially or
fully substituted by F:

with the provisos that:

if X is sulfur, y4 is denotes 2, and if X is carbon, y4 is denotes 1 and p4 or q ≥ 1, and and where the carbon atoms of the alkyl chain of the formula II 4 may be bonded to one another by single bonds, where the resultant alkylene chain may in turn be partially or fully substituted by F.

and

CA'F* is a cation selected from the group of the azine, xanthene, polymethine, styryl, azo, tetrazelium, pyrylium, benzopyrylium, thiopyrylium, benzothiopyrylium, thiozine, exazine, triarylmethane, diarylmethane, aeridine, quinoline, isoquinoline or quaternised azafluorem me-dyes,

where 3,3'-diethoxyethyl-2,2'-thiadicarbocyanine trifluoromethyltrifluoroborate is excluded.

- 2. (Currently Amended): A dye Dyes according to Claim 1, wherein character-ised in that CAT is a cation of an azine dye.
- 3. (Currently Amended): A dye Dyes according to Claim 1, wherein character ised in that CAT is a cation of a xanthene dye.
- 4. (Currently Amended): A dye Dyes according to Claim 1, wherein characterised in that CAT* is a cation of a polymethine dye.
- 5. (Currently Amended): A dye Dyes according to Claim 1, wherein character-isod in that CAT is a cation of a styryl dye.
- 6. (Currently Amended): A dye Dyes according to Claim 1, wherein character ised in that CAT is a cation of an azo dye.
- 7. (Currently Amended): A dye Dyes according to Claim 1, wherein character ised in that CAT is a cation of a tetrazolium dye.
- 8. (Currently Amended): A dye Dyes according to Claim 1, wherein characterised in that CAT is a cation of a pyrylium dye.
- 9. (Currently Amended): A dye Dyes according to Claim 1, wherein characterised in that CAT is a cation of a benzopyrylium dye.
- 10. (Currently Amended): A dye Dyes according to Claim 1, wherein characterised in that CAT is a cation of a thiopyrylium dye.
- 11. (Currently Amended): A dye Dyes according to Claim 1, wherein characterised in the CAT* is a cation of a benzothiopyrylium dye.

- 12. (Currently Amended): A dye Dyes according to Claim 1, wherein characterised in that CAT is a cation of a thiazine dye.
- 13. (Currently Amended): A dye Dyes according to Claim 1, wherein characterised in that CAT is a cation of an oxazine dye.
- 14. (Currently Amended): A dye Dyes according to Claim 1, wherein character-ised in that CAT is a cation of a triarylmethane dye.
- 15. (Currently Amended): A dve Dyes according to Claim 1, wherein characterised in that 1 is a cation of a diarylmethane dye.
- 16. (Currently Amended): A dye Dyes according to Claim 1, wherein characterised-in that CAT is a cation of an acridine dye.
- 17. (Currently Amended): A dye Dyes according to Claim 1, wherein characterised in that CAT is a cation of a quinoline dye.
- 18. (Currently Amended): A dye Dyes according to Claim 1, wherein character ised in that CAT is a cation of an isoquinoline dye.
- 19. (Currently Amended): A dye Dyes according to Claim 1, wherein characterised in that CAT is a cation of a quaternary azafluorenone dye.
- 20. (Currently Amended): A dve Dyes according to Claim 4, wherein characterised in that CAT is a cation of a cyanine dye.
- 21. (Currently Amended): A dye Dyes according to Claim 4, wherein character ised in that CAT* is a cation of a carbocyanine dye.
 - 22. (Currently Amended): A dye Dyos according to Claim 4, wherein character-

ised in that CAT' is a cation of an azacarbocyanine dye.

- 23. (Currently Amended): A dye Dyes according to Claim 4, wherein characterised in that CAT is a cation of a diazacarbocyanine dye.
- 24. (Currently Amended): A dye Dyes according to Claim 4, wherein characterised in that (CAT' is a cation of a triazacarbocyanine dye.
- 25. (Currently Amended): A dve Dyes according to Claim 4, wherein character ised in that CAT is a cation of a hemicyanine dye.
- 26. (Currently Amended): A dve Dyes according to Claim 4, wherein characterised in that at CAT is a cation of a diazahemicyanine dye.
- 27. (Currently Amended): A dye Dyes according to claim 1, wherein characterised in that Y is a cyanoborate of the formula II-1

$$[B(CN)_{y_1}F_{4-y_1-x_1}(R^0)_{x_1}]$$
 (II-1).

wherein and

- yl <u>is denotes</u> 1, 2, 3 or 4.
- x1 is denotes 0, 1, 2 or 3 and
- R^0 is denotes alkyl, aryl, fluorinated alkyl, fluorinated aryl, cycloalkyl or alkylaryl, with the condition that R^0 may be hydrogen if y1 is >2.
- 28. (Currently Amended): A dye Dyes according to claim 1, wherein characterised in that Y is a fluoroalkylphosphate of the formula II-2

$$[P(C_{n2}F_{2n2+1-m2}H_{m2})_{y2}F_{6-y2}]$$
 (II-2)

wherein with

p<u>2 is 1 to 20.</u>

m2 is 0, 1, 2 or 3 and

y2 is 1, 2, 3 or 4

p2; 1 to 20,

29. (Currently Amended): A dve Dyes according to claim 1, wherein characterised in that Y is a fluoroalkylborate of the formula II-3

$$[B(C_{03}F_{203+1-m3}H_{m3})_{y3}F_{4-y3}]$$
 (II-3)₁

wherein with

p3 <u>is</u> 1 to 20,

m3 is 0, 1, 2 or 3 and

y3 <u>is</u> 1, 2, 3 or 4,

— where 3,3' diethoxyethyl 2,2' thiadlearbooyanine trifluoromethyltrifluoro-borate in excluded.

30. (Currently Amended): A dye Dyes according to claim 1, wherein character-lised-in-that Y is an imide of the formula II-4

$$[(C_{p4}F_{2p4+1+m4}H_{m4}XO_{y4}) N (C_{q}F_{2q+1+k}H_{k}XO_{y4})]^{*} \qquad (II-4)$$

wherein and the variables

X <u>is denotes</u> carbon or sulfur,

p4 is denotes 0 to 20 and $0 \le m4 \le 2p4+1$,

q is denotes 0 to 20 and $0 \le k \le 2q+1$,

y4 is denotes 1 or 2,

m4 is 0 if p4 is 0, and

k is 0 if q is 0.

where m4 = 0 if p4 = 0 and k = 0 if q = 0,

with the proviso that

if X is sulfur, y4 is denotes 2, and if X is carbon, y4 is denotes 1 and p4 or q ≥ 1, and where the earbon atoms of the alkyl chain of the formula II 4 may be bonded to one another by single bonds, where the resultant alkylone chain may in turn be partially of fully substituted by F.

31. (Currently Amended): A process Process for the preparation of a cationic dye

dyes according to claim 1, said process comprising: characterised in that

reacting a compound of the general formula XXI

CAT'A' (XXI),

where CAT' is a cariou selected from the group of the azine, xanthene, polymethine, styryl, azo, tetrazolium, pyrylium, benzopytylium, thiopytylium, benzothiopyrylium, thiazine, oxazine, triarylmethane, diarylmethane, asridine, quinoline, isoquinoline or quaternised azafluoreno 10-dyes

wherein and A is denotes Cl., Br., I, BF4., PF6., ClO4., sulfate, tosylate, hydrosulfate, triflate, trifluoroaceiate, acetate or oxalate,

is renoted with a compound of the general formula XXII

wherein where Y is an anion-selected from the group CAB, FAP, FAB or Im,

where CAB conforms to the general formula (II-1) [B(CN)yiF4-y1-n1(R⁰)*1]---(II-1) and +1 denotes 1, 2, 3 or 4, x1 denotes 0, 1, 2 or 3 and R0_ --denotes alkyl, aryl, fluorinated alkyl, fluorinated-aryl, cycloalkyl or alkylaryl, with the condition that R⁰ may be hydrogen if y1 is >2, where FAP conforms to the general formula (II-2) $- \frac{[P(C_{n2}F_{2y2+1-m2}H_{m2})_{y2}F_{6-y2}]}{-(H-2)}$ with -1 to-20-____m2: _______0, 1, 2 or 3 and ______1, 2, 3 or 4, where FAB conforms to the general formula (II 3) ______[B(C_{p3}F_{3p3+1-m3}H_{m3})y₃F_{4-y3}]-----(H 3) with

MERCK-3134

- 1 to 20,

m3 — 0, 1, 2 or 3 and
y3 — 1, 2, 3 or 4,

where Im conforms to the general formula (II 4)

—
$$[(C_{pq}F_{2pq+1-mq}H_{mq}XO_{pq})N(G_{q}P_{2q+1-k}H_{k}XO_{pq})]$$
 — (II 4)

and the variables

X — denotes earbon or sulfur,
p4 — denotes 0 to 20 and $0 \le m4 \le 2p4+1$,
q — denotes 0 to 20 and $0 \le k \le 2q+1$,
y4 — denotes 1 or 2,
where $m4 = 0$ if $p4 = 0$ and $k = 0$ if $q = 0$,
with the provise

if X is sulfur, y4 denotes 2 and if X is earbon, y4 denotes 1 and p4 or q ≥ 1,

and where the carbon atoms of the alkyl chain of the formula II 4-may be bonded to

one another by single bonds, where the resultant alkylene chain may in turn be partially or

fully substituted by F, and

 E^{\dagger} is a cation selected from cations of the alkali metals, alkaline earth metals or of a metal from group 11 and 12, ammonium, alkylammonium containing C_1 - C_4 -alkyl, phosphonium, alkylphosphonium containing C_1 - C_4 -alkyl, and or guanidinlum.

32. (Currently Amended): A process Process for the preparation of carbocyanine dye dyes according to Claim 21, where the carbocyanine dye conforms to the formula XXIII

$$\begin{array}{c|c}
 & R' & R' \\
 & C & C \\
 & R' \\
 & R'
\end{array}$$

$$\begin{array}{c|c}
 & C & R' \\
 & C & C
\end{array}$$

$$\begin{array}{c|c}
 & C & R' \\
 & R'
\end{array}$$

$$\begin{array}{c|c}
 & C & R' \\
 & R'
\end{array}$$

$$\begin{array}{c|c}
 & XXIII
\end{array}$$

wherein in which

n is denotes 0, 1, 2, 3, 4 or 5,

R in each case, independently of one another, \underline{is} denotes alkyl, alkenyl, cycloalkyl, aryl or heteroaryl, and

R¹ in each case, independently of one another, is denotes H. Cl, Br, I, alkyl, partially or fully chlorinated alkyl, alkenyl, cycloalkyl, aryl, heteroaryl, Oalkyl, Oaryl, Salkyl, Saryl. NHalkyl, N(alkyl)₂, C(O)H, C(O)alkyl, C(O)aryl, CN, N=N-aryl, P(aryl)₂, NHC(O)alkyl or MERCK-3134

NHC(O)aryl and

the ring system, represented by

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is denotes a nitrogen-containing unsaturated mono-, bi- or tricyclic heterocycle having 5 to 13 ring members, which optionally contains may furthermore contain 1, 2 or 3 N and/or 1 or 2 S or O atoms and in which the heterocyclic radical is optionally may be mono- or polysubstituted by Z.

Z <u>is denotes</u> hydrogen, alkyl, NO₂, F, Cl, Br, I, OH, COOH, Oalkyl, SCN, SCF₃, COOalkyl, (CH₂-COOalkyl, NH₂, NHalkyl or N(alkyl)₂

and

o:adw

Y is an anion selected from the group CAB, FAP, FAB and or Im,

who:e

CAH conforms to the general formula (II-1)

$$[B(CN)_{yl}F_{4-yl-xl}(R^0)_{xi}]$$
 (II-1)

and

yl <u>is</u> denotes 1, 2, 3 or 4,

x1 is denotes 0, 1, 2 or 3, and

 R^0 is denotes alkyl, aryl, fluorinated alkyl, fluorinated aryl, cycloalkyl or alkylaryl, with the condition that R^0 may be hydrogen if yl is >2,

where

FAIr conforms to the general formula (II-2)

$$[P(C_{y2}F_{2p2+1-m2}H_{m2})_{y2}F_{6-y2}]$$
 (II-2),

with:

p2 [[:]] is 1 to 20,

m2 [[:]]is 0, 1, 2 or 3, and

y2 | [:] } is 1, 2, 3 or 4,

wh He

FAB conforms to the general formula (II-3)

$$[B(C_{\rho3}F_{2\rho3+1-m3}H_{m3})_{y3}F_{4-y3}]$$
 (II-3),

with

p3 [[:]] is 1 to 20,

m3 [[:]]is 0, 1, 2 or 3, and

y3 [[:]] is 1, 2, 3 or 4,

where

Im conforms to the general formula (II-4)

$$[(C_{p4}F_{2p4+1-m4}H_{m4}XO_{y4}) N (C_{q}F_{2q+1-k}H_{k}XO_{y4})] \qquad (\hat{\Pi}-4)_{\underline{\ }}$$

and the variables

X is denotes carbon or sulfur,

p4 is denotes 0 to 20 and $0 \le m4 \le 2p4+1$,

q is denotes 0 to 20 and $0 \le k \le 2q+1$,

y4 is denotes 1 or 2,

where

m4 is [[=]] 0 if p4 is [[=]] 0, and

k = is[[=]] 0 if q is[[=]] 0, and

the partial transport the alkyl chain of the formula II-4 may be bonded to one another

by single bonds, where the resultant alkylene chain may in turn be partially or
fully substituted by F;

with the proviso that

if X is sulfur, y4 is denotes 2, and if X is carbon, y4 is denotes 1 and p4 or $q \ge 1$,

and where the earbon atoms of the alkyl chain of the formula II 4 may be bonded to one-another by single bonds, where the resultant alkylone chain may in turn be partially or fully substituted by F.

said process comprising utilizing characterised in that use is made of a compound of the formula XXIV

where the ring system, R, R^1 and Y have one of the meanings indicated in the case of formula $XXIII_a$ and MERCK-3134

- 11 -

- n <u>is denotes</u> 0, 1, 2, 3 or 4 and
- G is denotes hydrogen, alkyl, alkenyl, aryl, heteroaryl, N=C(R)₂, CONHaryl, C(O)aryl or CONHalkyl.
- 33. (Currently Amended): A compound according to Compounds of the formula XXIV

where

- n <u>is</u> denotes 0, 1, 2, 3 or 4,
- G is denotes hydrogen, alkyl, alkenyl, aryl, heteroaryl, N=C(R)₂, CONHaryl, C(O)aryl or CONHalkyl,
 - R is denotee alkyl, alkenyl, cycloalkyl, aryl or heteroaryl,
- R¹ is in each case, independently of one another, denotes H, Cl, Br, I, alkyl, partially or fully chlorinated alkyl, alkenyl, cycloalkyl, aryl, heteroaryl, Oalkyl, Oaryl, Salkyl, Saryl, NHalkyl, N(alkyl)₂, C(O)H, C(O)alkyl, C(O)aryl, CN, N=N-aryl, P(aryl)₂, NHC(O)alkyl or NHC(O)aryl, and

the ring system, represented by

is denotes a nitrogen-containing unsaturated mono-, bi- or tricyclic heterocycle having 5 to 13 ring members, optionally containing which may furthermore contain 1, 2 or 3 N and/or 1 or 2 S or O atoms and in which the heterocyclic radical is optionally may be mono- or polysubstituted by Z,

Z <u>is denotes</u> hydrogen, alkyl, NO₂, F, Cl. Br, I, OH, COOH, Oalkyl, SCN, SCF₃, COOalkyl, CH₂-COOalkyl, NH₂, NHalkyl or N(alkyl)₂,

and

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where
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Y is an anion selected from the group CAB, FAP, FAB and or Im,

where

CAB' conforms to the general formula (II-1)

$$[B(CN)_{y1}F_{4-y1-x1}(R^0)_{x1}]$$
 (II-1),

and

y1 is denotes 1, 2, 3 or 4,

x1 is denotes 0, 1, 2 or 3, and

 R^0 is denotes alkyl, aryl, fluorinated alkyl, fluorinated aryl, cycloalkyl or alkylaryl, with the condition that R^0 may be hydrogen if y1 is >2,

where

PAP conforms to the general formula (II-2)

$$[P(C_{p2}F_{2p2+1-m2}H_{m2})_{y2}F_{6-y2}]^{-}$$
 (II-2),

with

p2 [[:]] is 1 to 20,

m2 ([:]]is 0, 1, 2 or 3, and

y2 [[:]] is 1, 2, 3 or 4.

where FAB' conforms to the general formula (II-3)

$$[B(C_{p3}F_{2p3+1-m3}H_{m3})_{y3}F_{4-y3}]^{-}$$
 (II-3),

with:

p3 <u>is</u> 1 to 20,

m3 is 0, 1, 2 or 3, and

y3 <u>is</u>1, 2, 3 or 4,

whore

Im conforms to the general formula (II-4)

$$[(C_{p4}F_{2p4+1-m4}H_{m4}XO_{y4}) \ N \ (C_qF_{2q+1-k}H_kXO_{y4})]^{-} \qquad (II-4),$$

and the variables

X is denotes carbon or sulfur,

p4 is denotes 0 to 20 and $0 \le m4 \le 2p4+1$,

q is denotes 0 to 20 and $0 \le k \le 2q+1$,

y4 is denotes 1 or 2,

where

m4 <u>is</u> [[=]] 0 if p4 is [[=]] 0_1 and

k \underline{is} [[=]] 0 if q \underline{is} [[=]] 0,

where the carbon atoms of the alkyl chain of the formula II-4 may be bonded to one another by single bonds, and the resultant alkylene chain may in turn be partially or fully substituted by F;

with the previse provises that:

if X is sulfur, y4 is denotes 2, and

if X is carbon, y4 is denotes 1 and p4 or $q \ge 1$,

and where the carbon atoms of the alkyl chain of the formula II 4 may be bonded to one another by single bonds, where the resultant alkylene chain may in turn be partially or fully substituted by F.

34. (Currently Amended): A process Process for the preparation of a compound the compounds of the formula XXIV according to Claim 33, said process comprising reacting characteristed in that

a compound of the formula XXV

+
$$N = C$$
 $(C = C)_n - CH_2 - G$
 A
XXV

in which

A is denotes Cl⁻, Br⁻, Γ, BF₄⁻, PF₆⁻, ClO₄⁻, sulfate, tosylate, hydrosulfate, trifluoroacetate, acetate or oxalate,

the ring system, represented by

is denotes a nitrogen-containing unsaturated mono-, bi- or tricyclic heterocycle having 5 to 13 ring members, which optionally further contains may furthermore contain 1, 2 or 3 N and/or 1 or 2 S or O atoms, and in which the heterocyclic radical is optionally may be mono- or polysubstituted by Z,

- Z <u>is denotes</u> hydrogen, alkyl, NO₂, F, Cl, Br, I, OH, COOH, Oalkyl, SCN, SCF₃, COOalkyl, CH₂-COOalkyl, NH₂, NHalkyl, or N(alkyl)₂.
 - n is denotes 0, 1, 2, 3 or 4,
 - R is denetes alkyl, alkenyl, cycloalkyl, aryl or heteroaryl,
- R¹ is in each case, independently of one another, denotes H, Cl, Br, I, alkyl, partially or fully chlorinated alkyl, alkenyl, cycloalkyl, aryl, heteroaryl, Oalkyl, Oaryl, Salkyl, Saryl, NHalkyl, N(alkyl)₂, C(O)H, C(O)alkyl, C(O)aryl, CN, N=N-aryl, P(aryl)₂, NHC(O)alkyl, or NHC(O)aryl, and
- G is denotes hydrogen, alkyl, alkenyl, aryl, heteroaryl, N=C(R)₂, CONHaryl, C(O)aryl, or CONHalkyl,

is-reacted with a compound of the formula XXVI

XXVI,

in which

 E^{+} is a cation of the alkali metals, alkaline earth metals or of a metal from group 11 and 12, ammonium, alkylammonium containing C_1 - C_4 -alkyl, phosphonium, alkylphosphonium containing C_1 - C_4 -alkyl, or guanidinium, and

wh∞re

Y is an anion selected from the group CAB, FAP, FAB and or lm,

₩hore

CAB conforms to the general formula (II-1)

$$[B(CN)_{y1}F_{4-y1-x1}(R^0)_{x1}]$$
 (II-1)_x

and

y1 <u>is denotes</u> 1, 2, 3 or 4,

x1 is denotes 0, 1, 2 or 3, and

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is denotes alkyl, aryl, fluorinated alkyl, fluorinated aryl, cycloalkyl or alkyl-
        R^0
aryl, with the condition that R0 may be hydrogen if y1 is >2,
        FAP conforms to the general formula (II-2)
                                                           (II-2)<sub>-</sub>
                         [P(C_{p2}F_{2p2+1-m2}H_{m2})_{y2}F_{6-y2}]
        with
        p2 [[:]] is 1 to 20,
        m2 [[:]]is 0, 1, 2 or 3, and
        y2 [[:]] is 1, 2, 3 or 4,
        where
        FAB conforms to the general formula (II-3)
                                                             (\Pi - 3)_{3}
                         [B(C_{p3}F_{2p3+1-m3}H_{m3})_{y3}F_{4-y3}]
        with
                 is 1 to 20,
        р3
                 is 0, 1, 2 or 3, and
         m3
                 is 1, 2, 3 or 4,
         у3
         where
         Im conforms to the general formula (II-4)
                          [(C_{p4}F_{2p4+1-m4}H_{m4}XO_{y4})N(C_qF_{2q+1-k}H_kXO_{y4})]^T
                                                                                   (\Pi-4)_{x}
         and the variables
                  is denotes carbon or sulfur,
         X
                  is denotes 0 to 20 and 0 \le m4 \le 2p4+1,
         р4
                  is denotes 0 to 20 and 0 \le k \le 2q+1,
                  is denotée 1 or 2,
         у4
         whore
         m4
                  is [[=]] 0 if p4 is [[=]] 0, and
```

where the carbon atoms of the alkyl chain of the formula II-4 may be bonded to one another by single bonds, and the resultant alkylene chain may in turn be partially or fully substituted by F;

with the provise provises that

k

<u>is</u> [[=]] 0 if q is [[=]] 0,

if X is sulfur, y4 is denotes 2, and if X is carbon, y4 is denotes 1 and p4 or q ≥ 1, and where the carbon atoms of the alkyl chain of the formula II 4-may be bonded to one another by single bonds, where the resultant alkylene chain-may in turn be partially or fully substituted by F.

35. (Currently Amended): A process Process for the preparation of a compound compounds of the formula XXIV according to Claim 33, with the restriction that n in formula XXIV is denotes 0, characterised in that said process comprising:

reacting a compound of the formula XXVII

in which

G is denotes hydrogen, alkyl, alkenyl, aryl, heteroaryl, N=C(R)2, CONHaryl, C(O)aryl, or CONHalkyl, and

R is denotes alkyl, alkenyl, cycloalkyl, aryl or heteroaryl,

and

the ring system, represented by

is denotes a nitrogen-containing unsaturated mono, bi- or tricyclic heterocycle having 5 to 13 ring members, which optionally further contains may furthermore contain 1, 2 or 3 N and/or 1 or 2 S or O atoms, and in which the heterocyclic radical is optionally may be monoor polysubstituted by Z.

Z is denotes hydrogen, alkyl, NO₂, F, Cl, Br, I, OH, COOH, Oalkyl, SCN, SCP₃, COOalkyl, CH₂-COOalkyl, NH₂, NHalkyl, or N(alkyl)₂,

is reseted

with a compound HY,

where

Y is an anion selected from the group FAP, FAB and or Im,

where

FAP conforms to the general formula (II-2)

$$[P(C_{p2}F_{2p2+1-m2}H_{m2})_{y2}F_{6-y2}]$$
 (II-2),

with

p2 [|:]]is 1 to 20,

m2 [[:]]is 0, 1, 2 or 3, and

y2 [1:]] is 1, 2, 3 or 4,

whore

FAB conforms to the general formula (II-3)

$$[B(C_{n3}F_{2n3+1-m3}H_{m3})_{y3}F_{4-y3}]$$
 (II-3)

₩ith

p3 is 1 to 20,

m3 <u>is</u> 0, 1, 2 or 3, and

y3 is 1, 2, 3 or 4,

where

Im conforms to the general formula (II-4)

$$[(C_{p4}F_{2p4+1-m4}H_{m4}XO_{y4}) N (C_{q}F_{2q+1-k}H_{k}XO_{y4})]^{-} (II-4)$$

and the variables

X is denotes carbon or sulfur,

p4 is denotes 0 to 20 and $0 \le m4 \le 2p4+1$,

q is denotes 0 to 20 and $0 \le k \le 2q+1$,

y4 is denotes 1 or 2,

whore

m4 <u>is [[=]]</u> 0 if p4 is [[=]] 0, and

k = is[[=]] 0 if q is[[=]] 0,

where the carbon atoms of the alkyl chain of the formula II-4 may be bonded to one

another by single bonds, and the resultant alkylene chain may in turn be partially or fully substituted by F:

with the provises provises that

if X is sulfur, y4 is denotes 2, and if X is carbon, y4 is denotes 1 and p4 or q ≥ 1, end-where the carbon atoms of the alkyl-chain of the formula H 4 may be bonded to one unother by single bonds, where the resultant alkylene chain may in turn be partially or fully substituted by F.

36. (Currently Amended): A process Process for the preparation of an azo dyes according to Claim 6, where the wherein said azo dye conforms to the formula XXVIII

$$(R'-N=N-R'')^+$$
 Y· XXVIII

where

R' and R'' are each denote aryl or heteroaryl and one of the two aromatic nuclei is positively charged, and

where

Y' is an anion selected from the group CAB', FAP', FAB' and or Im',

where

CAB conforms to the-general formula (II-1)

$$[B(CN)_{vi}F_{4-vi-xi}(R^0)_{xi}]$$
 (II-1),

and

y1 is denotes 1, 2, 3 or 4,

x1 is denotes 0, 1, 2 or 3 and

R⁰ is denotes alkyl, aryl, fluorinated alkyl, fluorinated aryl, cycloalkyl or alkylaryl, with the condition that R⁰ may be hydrogen if y1 is >2,

whare

FAP conforms to the general formula (II-2)

$$[P(C_{p2}F_{2p2+1-m2}H_{m2})_{y2}F_{6-y2}]$$
 (II-2),

with

p2 [[:]] is 1 to 20,

m2 [[:]]is 0, 1, 2 or 3, and

y2 [[]] is 1, 2, 3 or 4,

where

FAB conforms to the general formula (II-3)

 $[B(C_{p3}F_{2p3+1-m3}H_{m3})_{y3}F_{4-y3}]$ (II-3)₂

with

p3 <u>is</u> 1 to 20,

m3 is 0, 1, 2 or 3, and

y3 <u>is</u> 1, 2, 3 or 4,

where

Im conforms to the general formula (II-4)

$$[(C_{pq}F_{2p4+1-m4}H_{m4}XO_{y4}) N (C_{q}F_{2q+1-k}H_{k}XO_{y4})] \qquad (II-4),$$

and-the-variables

X is denotes carbon or sulfur,

p4 is denotes 0 to 20 and $0 \le m4 \le 2p4+1$,

q is denotes 0 to 20 and $0 \le k \le 2q+1$,

y4 is denotes 1 or 2,

where

m4 \underline{is} [[=]] 0 if p4 \underline{is} [[=]] 0, and

k = is [[=]] 0 if q is [[=]] 0,

where the carbon atoms of the alkyl chain of the formula II-4 may be bonded to one another by single bonds, and the resultant alkylene chain may in turn be partially or fully substituted by F.

 \underline{said} process comprising reacting characterised in that a compound of the formula XXIX

R'-N2+ Y- XXIX

where R' and Y' has one of the meaning indicated in the case of formula XXVIII,

is reacted

with an the aromatic cyclic or heterocyclic compound R".

37. (Currently Amended): A compound according to Compounds of the formula

XXXX

R'-N2+ Y- XXIX

in which

R' is denotes aryl or heteroaryl, and

where

Y' is an anion selected from the group CAB', FAP', FAB' and or Im',

where

CAIs' conforms to the general formula (II-1)

$$[B(CN)_{y_1}F_{4-y_1-x_1}(R^0)_{x_1}]$$
 (II-1)

and

y1 <u>is denotes</u> 1, 2, 3 or 4,

x1 is denotes 0, 1, 2 or 3, and

 R^0 is denotes alkyl, aryl, fluorinated alkyl, fluorinated aryl, cycloalkyl or alkylaryl, with the condition that R^0 may be hydrogen if y1 is >2,

where

FAP conforms to the general formula (II-2)

$$[P(C_{n2}F_{2p2+1-m2}H_{m2})_{y2}F_{6-y2}]$$
 (II-2),

with

p2 |[:]] is 1 to 20,

m2 [[:]]is 0, 1, 2 or 3, and

y2 ([:]] is 1, 2, 3 or 4,

whore

FAB conforms to the general formula (II-3)

 $[B(C_{n3}F_{2n3+1-m3}H_{m3})_{y3}F_{4-y3}]$ (II-3),

with

p3 is 1 to 20,

m3 is 0, 1, 2 or 3, and

y3 is 1, 2, 3 or 4,

where

Im conforms to the general formula (II-4)

$$[(C_{p4}F_{2p4+1+in4}H_{m4}XO_{y4}) N (C_qF_{2q+1-k}H_kXO_{y4})]$$
 (II-4)

and the variables

X is denotes carbon or sulfur,

p4 is denotes 0 to 20 and $0 \le m4 \le 2p4+1$.

q is denotes 0 to 20 and $0 \le k \le 2q+1$.

y4 is denotes 1 or 2,

where

m4 <u>is</u> [(=)] 0 if p4 is [(=)] 0_1 and

k <u>is</u> [[=]] 0 if q is [[=]] 0,

where the carbon atoms of the alkyl chain of the formulae II-4 may be bonded to one another by single bonds, and wherein the resultant alkylene chain may in turn be partially or fully substituted by F;

with the previse provises that

if X is sulfur, y4 is denotes 2, and if X is carbon, y4 is denotes 1 and p4 or q ≥ 1.

and where the earbon atoms of the alkyl chain of the formulae II 4 may be bonded to
one another by single bonds, where the resultant alkylone chain may in turn be partially or
fully substituted by F.

- (Currently Amended): In a method of Use of the dyes according to claim 1 for colouring plastics and plastic fibres, preparing for the preparation of flexographic printing inks, as ball-point pen pastes, or as stamp ink, for colouring leather and paper, in preparing cosmetic formulations in the paints industry, or coloring in biochemistry, biology, medicine, analytics or electronics, the improvement wherein a dye according to claim 1 is used for coloring.
- 39. (Currently Amended): In a method of using a dye Use of the dyes according to elaim-1 in data acquisition systems, reprography, in ink microfilters, in photogalvanics, laser technology or the photo industry, the improvement wherein said dye is a dye according to

claim 1.

- 40. (Currently Amended): In a method of using a dye Use of the dyes according to claim-1 for CD recorders, DVD recorders (DVD+R, DVD+RW), Bluray disc (BD-ROM, BD-R, BD-RE), computer to plate, laser filters, laser marking or photopolymerisation, the improvement wherein said dye is a dye according to claim 1.
- 41. (New): A dye according to Claim 28, wherein CAT⁺ is a cation of a polymethine dye.
 - 42. (New): A dye according to Claim 28, wherein p2 is 1, 2, 3, 4, 5, 6, 7 or 8.
 - 43. (New): A dye according to Claim 28, wherein p2 is 2, 3 or 4.
- 44. (New): A dye according to Claim 28, wherein Y is $PF_3(C_2F_5)_3$, $PF_3(C_4F_9)_3$, $PF_3(C_3F_7)_3$ or $PF_4(C_2F_5)_2$.